WHAT IS CLAIMED

1. An improved see through lens, comprising a radically shaped lens having a substantially uniform thickness, wherein:

the lens has a substantially constant radius of curvature of between 27-20 mm with respect to at least one axis of the lens; and

the lens has no discernable peripheral distortion when positioned proximate to an eyeball of normal shape and size.

2. The improved lens according to Claim 1, wherein the lens is formed of transparent material.

3. The improved lens according to Claim 1, wherein the percentage of the lens used for viewing at least 20° in both the vertical and horizontal directions is in the range of 80° to about 94° at a distal portion of the lens.

4. The improved lens according to Claim 3, wherein the percentage of the lens used for viewing at least 20° in both the vertical and horizontal directions is in the range of 140° to about 156° at a proximal portion of the lens.

5. The improved lens according to Claim 1, wherein the substantially constant radius of curvature of the lens with respect to the spheric axis is in the range of between 27-20 mm.

6. Distortion-free eyewear, comprising:

a pair of radically-shaped see through lenses having a substantially constant thickness and a substantially constant radius of curvature of between 27-20 mm with respect to at least one axis of the lens; and

means for retaining the pair of lenses in a fixed position relative to a wear, whereby the lenses provide a field-of-view with no discernable peripheral distortion .

7. The distortion-free eyewear according to Claim 6, wherein the substantially constant radius of curvature is in the range of between 27-20 mm.

8. The distortion-free eyewear according to Claim 6, wherein the means comprises a frame member supporting the pair of lenses and attached at either end to a strap assembly adaptable for surrounding a wearer's head to retain the eyewear in place.

9. The distortion-free eyewear according to Claim 8, wherein the strap assembly includes a pair of elastomeric strap portions spaced from and connected to each other with end portions of one of the strap portions connected at opposite ends to the frame for securing the eyewear in place with minimal tension:

10. The distortion-free eyewear according to Claim 8, wherein the strap assembly includes an elastomeric strap connected at opposite ends to the frame.

11. The distortion-free eyewear according to Claim 8, wherein the frame is formed of a soft, impact resistant material and the strap assembly is formed of elastomeric, sweat absorbing material.

12. The distortion-free eyewear according to Claim 6, wherein the means comprises a frame member supporting the pair of lenses and a separate stem attached to each end of the frame for supporting the eyewear.

13. The distortion-free eyewear according to Claim 6, wherein each of the lenses includes at least one ventilation passageway extending completely there through, allowing air to circulate around both sides of each of the lenses.

14. Distortion-free eyewear, comprising:

a pair of radically shaped see through lenses having a substantially constant thickness and a substantially constant radius of between 27-20 mm with respect to at least one axis of each of the lenses;

a frame surrounding each of the lenses; and

a support assembly for retaining the lenses and frame in place.

15. The distortion-free eyewear according to Claim 14, wherein a separate flange member surrounds at least a portion of each of the radically shaped lenses and is releasably attached to the frame.

16. The distortion-free eyewear according to Claim 14, wherein a separate flange member completely surrounds each of the radically shaped lenses and is releasably attached to the frame.

17. The distortion-free eyewear according to Claim 14, wherein the pair of radically-shaped lenses each has a substantially constant radius of curvature in the range of between 27-20 mm with respect to the spheric axis.

18. Distortion-free eyewear, comprising:

a pair of radically-shaped see through lenses having a substantially constant thickness and a substantially constant radius of curvature of between 27-20 mm with respect to at least one axis of each of the lenses;

a separate flange member surrounding and integrally attached to each of the lenses;

a frame surrounding each of the flange members, with each of the flange members releasably attached to the frame; and,

a support assembly for retaining the lenses and frame in place.

19. The distortion-free eyewear according to Claim 18, wherein at least one ventilation passageway extends through the frame for allowing air to circulate around both sides of each of the lenses.

20. The distortion-free eyewear according to Claim 18, wherein at least one ventilation passageway extends through each of the lenses for allowing air to circulate around both sides of each of the lenses.

21. A lens element adapted for mounting in eyewear, the lens element having a zero through power and having at least one spherical surface with a radius of curvature in the range of about 20-27 27 mm, the lens element being adapted for positioning such that a center of curvature of the lens element is located at the centroid of rotation of the eye, wherein the lens element is sufficiently large to provide a field of view greater than 80°.

22. The lens element of claim 21, wherein the lens element is tinted.

23. A zero-power lens element having at least one surface which lies within a spherical shell defined by two concentric spheres having radii whose lengths differ by no more than 2 mm, the larger of the radii being no more than 27 mm and wherein the lens element is sufficiently large to provide a field of view greater than 80°.

24. The zero-power lens element of claim 23, wherein the smaller of the radii is between 20 and 23 mm.

25. The zero-power lens element of claim 23, wherein the smaller of the radii is 23 mm.

26. The zero-power lens element of claim 23, wherein the lens element is mounted in eyewear so that the center of the shell is located approximately at the centroid of rotation of the eye when the eyewear is worn.

27. A spectacle frame suitable for use with a series of zero-power lenses, each of the lenses having a radius or curvature R between 20 and 27 mm, each lens having the same value of R, the frame supporting left and right lenses in the as worn position so that the centers of the spherical surfaces are located approximately at the centroids of the left and right eyes,

respectively, the frame comprising temple pieces and rim portions for engaging the left and right lenses, wherein the rim portion engaging each lens is formed in the shape of a closed curve lying on the surface of a sphere having a radius approximately equal to the radius of the spherical surface.

28. The spectacle frame of claim 27, wherein the nasal-most point and temporal-most point of the closed curve subtend an arc of greater than 90° with a vertex at the center of the spherical surface.

29. The spectacle frame of claim 27, comprising a left temple piece, a right temple piece and a nose bridge.

30. Sunglasses comprising:

left and right zero-power tinted lenses each having a spherical front surface with the same radius of curvature between about 20 mm and 27 mm; and

eyeglass frames including left and right temple pieces and a nose bridge for supporting the lenses on the face of a wearer, so that the center of the spherical front surface of each of the left and right lenses is located approximately on the centroid of rotation of the left and right eye, respectively.

31. The sunglasses of claim 30, wherein the eyeglass frame is rim less.

32. The sunglasses of claim 30, wherein:

the eyeglass frame further comprises rim portions engaging each lens; and

the lenses are tinted.

33. Goggles comprising:

left and right zero-power lenses, each of the lenses having a spherical surface of the same radius R, R being a value between 20 and 27 mm; and

a support member including left and right temples pieces and a nose bridge for supporting the lenses on the face of a wearer, so that the center of the spherical surface of each of the left and right lenses is located approximately on the centroid of rotation of the left and right eye, respectively.

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34. The goggles of claim 33, wherein the radius R is greater than about 23 mm.